

SOME THOUGHTS CONCERNING THE INTRODUCTION OF EXOTIC GAME BIRDS

*(A Contribution from the Wilson Ornithological Society
Conservation Committee)*

Intentionally or unintentionally, man has been transporting plants and animals hither and yon about the world for centuries. Many of these transplants have failed; a few have succeeded, some with disastrous results. Of the many introductions of exotic game birds which have been made in the United States since the first planting of Hungarian partridges in New Jersey about 1790, three, the Ring-necked Pheasant (*Phasianus colchicus*), Hungarian Partridge (*Perdix perdix*), and the Chukar (*Alectoris graeca*), have been successful.

Interest in the introduction of exotic game birds—and mammals—has increased greatly during the past decade. A part of this has been due to the interest sportsmen acquired in the new species which they had seen during overseas duty with the armed forces. Possibly of equal importance has been the year by year increase in the number of hunters without a corresponding increase in the amount of game or in areas open to hunting. Also, many areas have been so altered by man that the native species no longer exist in sufficient numbers to provide hunting. The forces generated by the disgruntled hunter and the game administrator seeking to satisfy the demand for more game have resulted, among other things, in the recent reopening or enlarging of game farms and in an increased interest in new game species.

In 1949 the International Association of Game, Fish and Conservation Commissioners appointed a committee to study the problem of game introductions. This committee found that the U.S. Fish and Wildlife Service had already begun work in this field, having employed Dr. Gardner Bump to investigate the desirability and adaptability of certain exotic game birds, particularly species which would be successful in the arid and semi-arid southwest. Although the costs of this activity were being paid out of Pittman-Robertson administrative funds, apparently some state administrators were not aware of the program.

With the federal program already in operation, it is not at all surprising that the committee concluded in March, 1950: "1. That investigations and restrictions on the introduction of exotic animals into the United States and Canada should extend to all species of wild birds, mammals and fish, including non-game species. 2. That some central agency should undertake the task of determining, insofar as possible, the desirability or undesirability of exotic animals proposed for introduction, and of effecting the introduction of those game species which investigations indicate to be desirable and which will fill an existing need. 3. That the United States Fish and Wildlife Service is the most logical agency to act in this capacity, and that the eight per cent administrative funds available to that agency out of federal aid in wildlife restoration appropriations is the most logical and equitable source for financing the project. 4. That the project should involve not less than two full-time qualified technicians, nor more than \$50,000. annual expenditures. 5. That the legal restrictions upon the importation and/or introduction of species known or believed to be undesirable should be strengthened in every way possible, particularly within the state and provincial codes." (The fortieth conv. of the Intern. Assoc. of Game, Fish and Conserv. Comm., Sept., 1950, pp. 23-24). The committee also concluded that the existing program of the Fish and Wildlife Service should be expanded and that the introduction of mammals and fish should be investigated.

The following year the committee observed that four species of birds held promise of "filling voids in extensive ranges in our Southwest". These were the Chukar, the Seesee, (*Ammoperdix griseogularis*), the Black Partridge (*Francolinus francolinus*) and the Oriental Sand Grouse (*Pterocles*). The Black Grouse (*Lyrurus tetrix*) and Capercaillie (*Tetrao urogallus*) were already being tested in Wisconsin. The committee observed that the Fish and Wildlife Service was financing the program from their regular appropriations and that interested states should see that these appropriations were not killed by "people who misunderstand the intent and purpose of this activity." (The forty-first Conv. of the Intern. Assoc. of Game Fish and Conserv. Comm., Sept., 1951, p. 25).

In addition to the federal program referred to above, several states have embarked upon their own programs. These activities are founded upon the thesis that many habitats have been so changed by man that the native species can no longer maintain themselves in sufficient numbers to provide hunting. "Competing interests and the cost of reversing this trend are such that only a fraction of these lands can be restored to reasonable productivity in the foreseeable future. There are other coverts which never were fully occupied by native game birds or mammals possessing the characteristics requisite to survival in the face of today's intensive hunting pressure. For these, new, adaptable species possessing a high hunting resistance must be found or such areas will continue to provide hunting opportunities far below their productive potential." (Bump, G. 1951. *Trans. No. Amer. Wildl. Conf.*, 16: 317-18). These states are experimenting with various species of pheasants and exotic quail or attempting to create new forms through breeding.

A tremendous number and variety of exotic birds and mammals have been, and are still being, liberated by individuals and clubs. Some idea of the extent of this activity is obtained when we read that by 1940 at least 18 species of game mammals and 21 game birds had been imported into New York State alone, nearly all of them entirely or in part by individuals or clubs (Bump, G. 1941. *Trans. No. Amer. Wildl. Conf.*, 5: 409-420). The writer's experience has been that the tempo of this type of activity by individuals and clubs has been steadily increasing during the past 10 years.

There are a number of dangers inherent in the introduction of exotics. According to H. W. Levi (1952. *Sci. Monthly*, 74 [6]:315) these are: ". . . those of bringing in diseases, of hybridization with animals already present, and of ecological maladaptation, including the crowding out of native species." The writer is doubtful that adequate study can be made in the federal program to properly guard against these dangers; he is certain that these dangers receive little if any attention from most states, clubs or individuals.

The successful introduction of an exotic will produce changes in the ecology of the region in which the transplanted species thrives. In spite of apparent belief to the contrary by many administrators and some biologists, the idea that all of these changes can be predicted at present is ridiculous. Man has, however, made tremendous changes in the ecology of nearly every part of the world. He has the desire and the capability to continue making these changes at an ever increasing rate. It may not be presumptuous to point out, however, that although the position taken by the "ecological purist" may be indefensible, the fauna and flora of America is the heritage of us all not just the hunter. It is barely possible that something may be gained and little will be lost by informing, or even consulting, other segments of the population concerning the direction and goals of the coming planned ecology.

In the writer's opinion, the state is the key to the control of the introduction of

exotics. Exotics are unlikely to be introduced into a region by federal agencies unless the states involved express a desire for them. Some states lack adequate legislation to control the introduction of exotics by clubs and individuals. Even with authority though, it is often difficult for a state administrator to prohibit an importation and some state administrators apparently feel that it is expedient, at times, to encourage the importation of exotics. Decisions in matters of this kind are usually made at the administrative level; biologists often become informed of the situation when they are ordered to make the importation. A few states appear to have abandoned hope of being able to manage their native game birds and are searching for an exotic that can satisfy the demands of the hunter without management. In this respect, it appears possible that it is one thing to introduce Chukars into the southwest but quite another to introduce an Eurasian quail into the southeast where, presumably, it is supposed to multiply in those ". . . areas (which) have been so altered by man that the native species no longer exist in sufficient numbers to provide hunting" but avoid those areas still occupied by the native bobwhite.

The importation of exotic game birds—and mammals—will continue. The successful introduction of these exotics will alter the ecology of the regions involved, whether for better or for worse will depend upon one's point of view. The writer suggests, however, that adequate study and control of these importations is woefully lacking at state and local levels. Expediency does not appear to be an adequate substitute for study in guarding against the importation of diseases and the possible deleterious effects of hybridization (particularly when subspecies of indigenous forms are imported from other states) or the possibilities of ecological maladaptation. It is furthermore respectfully suggested that, when importations of exotics are being contemplated, the desires and advice of biologists and conservation organizations other than those directly concerned with hunting might well be given consideration by both federal and state agencies.—ROBERT A. PIERCE.

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